

CLAIMS

1. A device with an interlock apparatus for supplying gas to a semiconductor manufacturing device, the device comprising:

5 at least one solenoid valve configured to control the supply of a gas from a gas source to the semiconductor manufacturing device by open/shut operations;

a main controller configured to output a control signal for the semiconductor manufacturing equipment and a driver signal;

10 a driver configured to apply a driving voltage to the at least one solenoid valve in response to the driver signal from the main controller; and

an interlocker configured to sense the open/shut state of the at least one solenoid valve, and configured to transmit an interlock signal to the main controller.

2. The device of claim 1, wherein the interlocker comprises:

15 a comparator configured to compare the driving voltage of the at least one solenoid valve with a reference voltage value, and configured to transmit a result of the comparison to the main controller.

3. The device of claim 2, further comprising:

20 a display configured to display an abnormal state indicator when the result indicates an abnormal operation of the at least one solenoid valve.

4. The device of claim 2, further comprising:

25 a backflow cutoff valve, coupled between the gas source and the at least one solenoid valve, configured to prevent the gas from flowing backward.

5. A method of supplying gas to a semiconductor manufacturing device comprising:

outputting a control signal from a main controller;

30 applying a driving voltage to at least one solenoid valve in response to the control signal;

comparing the driving voltage with a reference voltage to obtain comparison data;

transmitting the comparison data to the main controller; and

transmitting an interlock generation signal from the main controller to the semiconductor manufacturing device in response to the comparison data.

6. The method of claim 5, further comprising:

5 displaying an abnormal state indicator when the comparison data indicates an abnormal operation of the at least one solenoid valve.